

800480 SERIES
OVERHAUL MANUAL

TO: HOLDERS OF VARIABLE PRESSURE REGULATOR ASSEMBLY
(800480 SERIES) OVERHAUL MANUAL

REVISION NO. 1 DATED 1 OCT. 70

HIGHLIGHTS

Pages which have been revised are outlined below with the highlights of the revision. Please delete the affected pages and enter Revision No. 1 dated 1 October 1970 to the Record of Revision Sheet.

Chapter/Section and Page No.	Description of Change	Effectivity
35-11-35 Title Page	Manual No. was 35-10-135. deleted "CORPORATION"; added date	All Models
35-11-35 List of Effective Pages	Revised masthead; revised to agree with updated text pages	All Models
35-11-35 Table of Contents	Revised masthead; revised paragraph titles and numbers	All Models
35-11-35 Pages 1 through	Revised masthead/ revised paragraph numbers to agree with latest revision of ATA Specification 100; added new Table I, Table II was I; added Table III; revised all paragraphs to agree with revised Illustrated Parts List indexing; revised Vendor Code listing; revised Illustrated Parts List and exploded view drawing to agree with latest regulator configuration	

A. T. A.
OVERHAUL MANUAL

**VARIABLE PRESSURE REGULATOR ASSEMBLY
800480 SERIES**

35-11-35

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LIST OF EFFECTIVE PAGES

Insert latest revised pages, destroy superseded pages.

Page	Date	Page	Date
*Title	1 October 70	*10	1 October 70
*List of Effective Pages	1 October 70	*11	1 October 70
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*1	1 October 70	*13	1 October 70
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*6	1 October 70	*18	1 October 70
*7	1 October 70	*19	1 October 70
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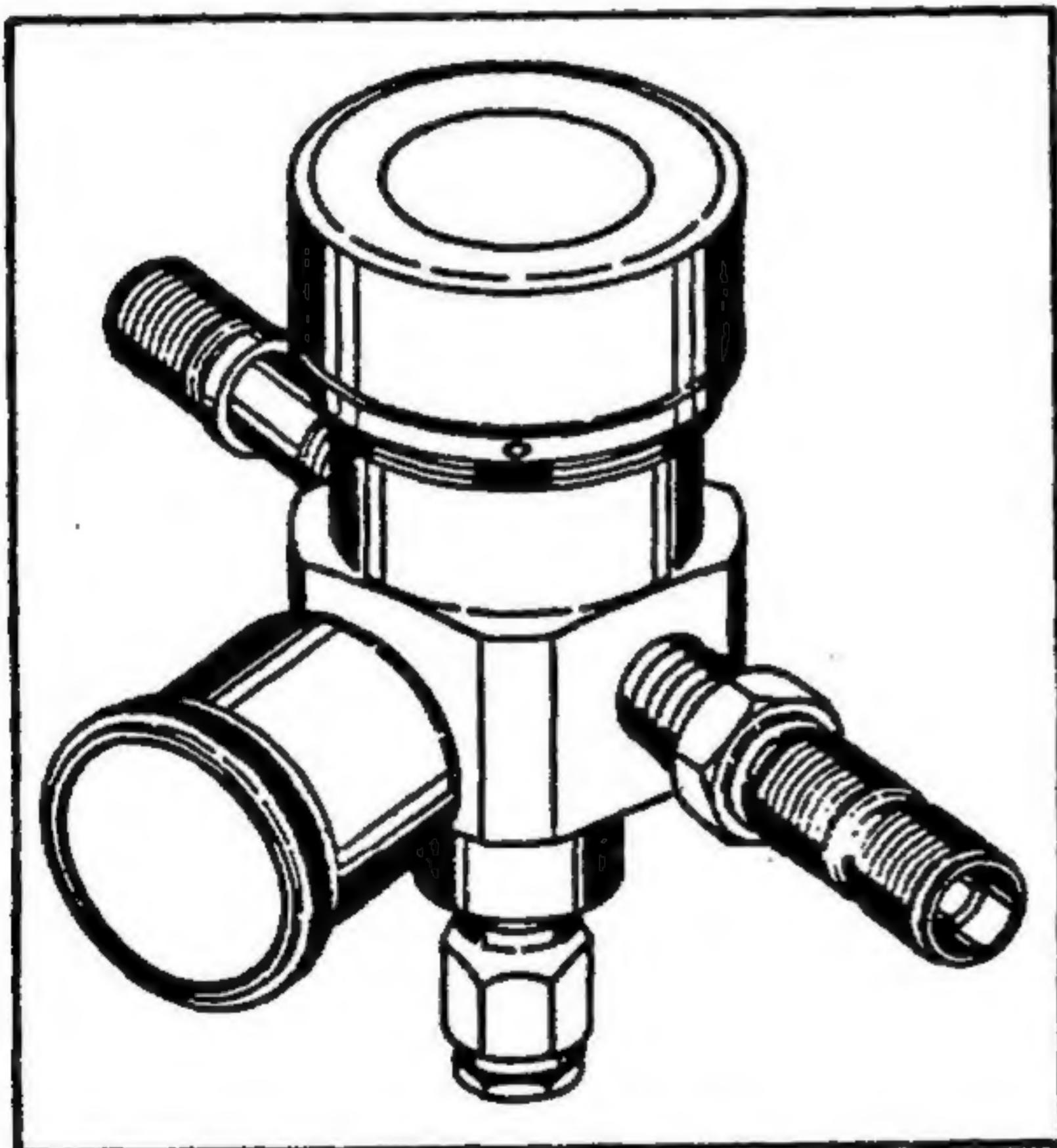
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VARIABLE PRESSURE REGULATOR ASSEMBLY1. Description and Operation

A. General

- (1) This manual provides overhaul instructions with illustrated parts list for the 800480-00, 800480-01, 800480-02, 800480-03 and 800480-04 Variable Pressure Regulator Assembly (see figure 1).
- (2) All 800480 series Variable Pressure Regulator Assemblies, hereafter referred to as the regulator, are identical in internal construction. Refer to the Illustrated Parts List for external regulator differences.

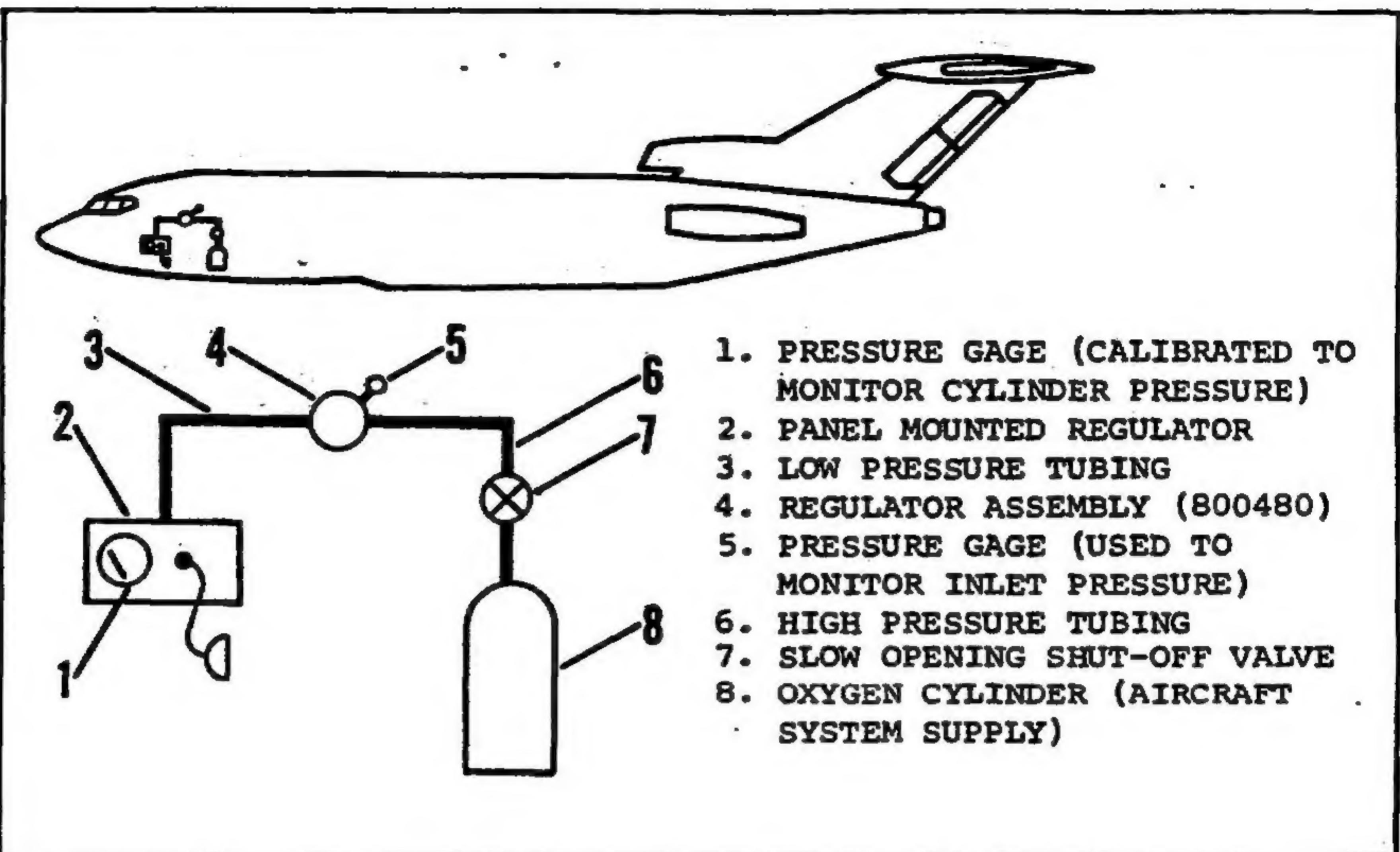
B. Purpose of Equipment



Typical Variable Pressure
Regulator Assembly
Figure 1

(1) This regulator is used to reduce oxygen cylinder pressure (100 to 1800 psig) to a lower pressure (50 to 150 psig) in a linear relationship. Because of the linear relationship, the regulator outlet pressure is proportional to the pressure in the high pressure cylinder. This permits the use of a remote, low pressure, pressure gage to indicate the cylinder oxygen supply, thereby eliminating the necessity of using a high pressure oxygen line.

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Typical Installation
Figure 2

C. Typical Installation

- (1) A typical installation of the regulator is illustrated in figure 2. Oxygen, which is stored at high pressure in cylinder (8), flows through slow opening shut-off valve (7) and high pressure tubing (6) to regulator assembly (4). Gage (5) is used to monitor inlet pressure. Regulator assembly (4) reduces the high pressure oxygen to a pressure of 150 ± 10 psig to 50 ± 10 psig. This low pressure oxygen then flows through low pressure tubing (3) to a panel mounted breathing regulator (2). Pressure gage (1) is calibrated against the outlet pressure of regulator assembly (4) in order to indicate oxygen cylinder (8) pressure.

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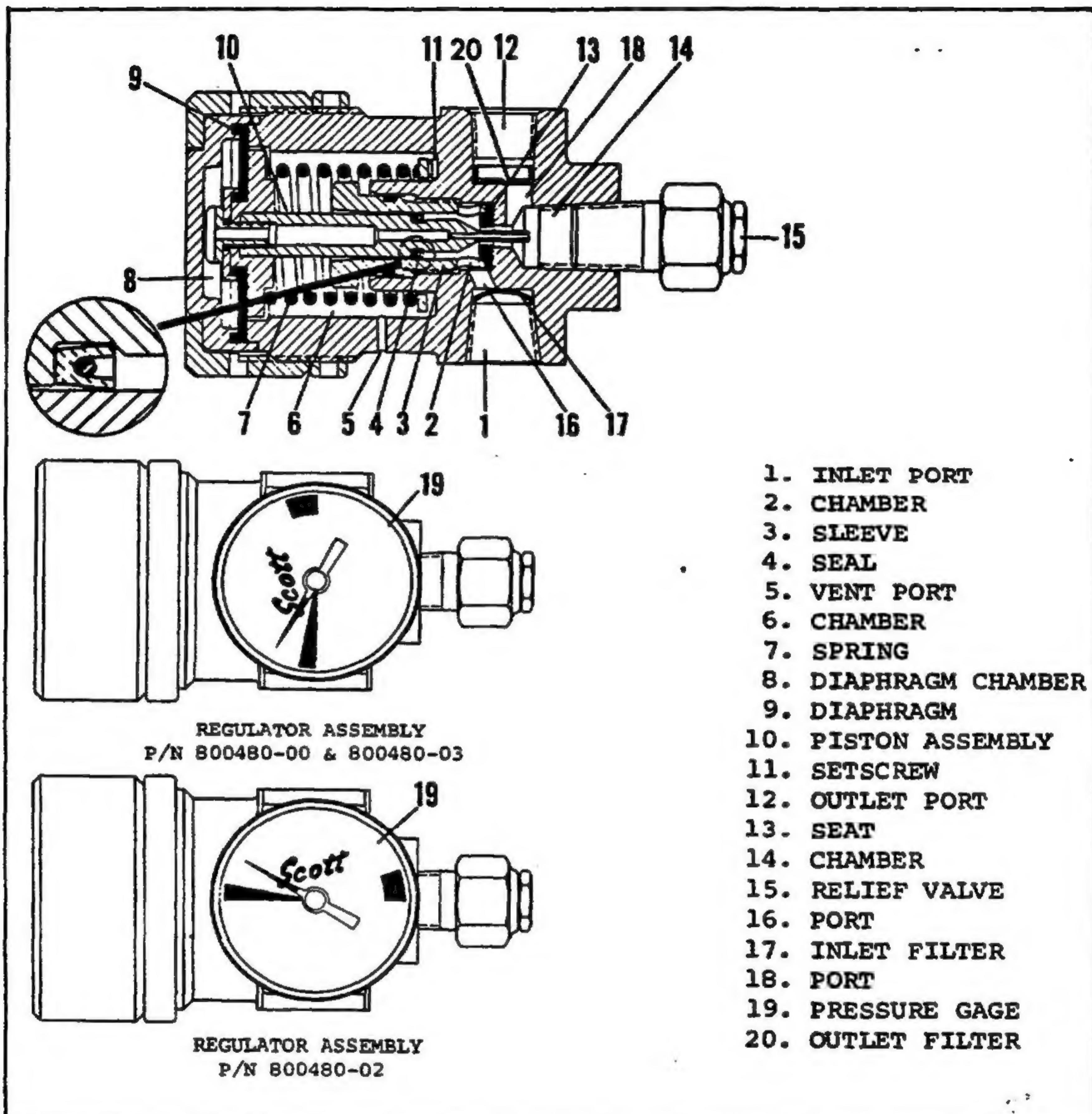
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D. Operation (See figure 3)

- (1) Oxygen, at cylinder pressure, enters the regulator at inlet port (1), passes through inlet filter (17) into port (16), through the holes in sleeve (3) and into chamber (2) where it acts against piston assembly (10) and seal (4). From chamber (2) this gas passes through the opening in seat (13) into chamber (14). The gas then passes through the hole in the center of piston assembly (10) and into diaphragm chamber (8) where it acts against the area of diaphragm (9).
- (2) With outlet port (12) closed, the pressure in the outlet port, port (18), chamber (14) and diaphragm chamber (8) is outlet pressure. This outlet pressure is equivalent to the pressure required to act against diaphragm (9) to balance the combined forces of spring (7) and the inlet pressure acting against seal (4) when piston assembly (10) contacts seat (13) closing off the flow of gas. When outlet port (12) is opened, the pressure applied against diaphragm (9) in chamber (8) decreases, thus unbalancing the forces. This causes spring (7) to push piston assembly (10) away from seat (13) allowing gas to flow from chamber (2) into the outlet chambers until the pressure acting against diaphragm (9) again balances the forces of spring (7) and the inlet pressure acting against seal (4). Therefore, outlet pressure decreases as inlet pressure decreases since it takes less outlet pressure acting against diaphragm (9) to balance out the force exerted by spring (7) and the inlet pressure acting against seal (4).
- (3) Three setscrews (11) are used to manually apply sufficient force to spring (7) to allow the regulator to supply outlet pressures in proportion to inlet pressures from 100 to 1800 psig.
- (4) Chamber (6) is vented to ambient at vent port (5) to prevent pressure from being trapped.

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Cross Section of Regulator Assembly
Figure 3

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- (5) Relief valve (15) is provided to prevent overpressurization downstream of the regulator. It is preset to open between 180 to 200 psig and reseat at a minimum of 165 psig.

2. Disassembly (See IPL figure 1)

NOTE: Prior to disassembling a 800480 regulator, note the part number and determine the parts applicable to that assembly (refer to "EFFECT CODE" column of the Illustrated Parts List). Disregard any instructions that do not apply to the particular assembly being overhauled.

- A. Unthread and remove pressure gage (6) or plug (7) from body (32).
- B. Unthread and remove fitting (8) or nipple (9) from body (32).
- C. Unthread and remove fitting (10) or fitting (11) and nut (12) from body (32).
- D. Unthread and remove relief valve assembly (13) from body (32).
- E. Unthread and remove six setscrews (14) from body (32).
- F. Back off jam nut (16) using wrench (3. figure 7). Unthread and remove cap nut (15. IPL figure 1) and jam nut (16) using wrench (3. figure 7).
- G. Remove cap (17. IPL figure 1). Unthread and remove screw (18) from piston assembly (21).
- H. Remove retainer (19). diaphragm (20). piston assembly (21), spring (23) and washer(s) (24) from body (32). Discard diaphragm (20).
- I. Remove seal (22) from piston assembly (21) and discard seal.
- J. Unthread and remove sleeve (25) from body (32). Remove packing (26) from sleeve (25) and discard.

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- K. Remove seat (27) from body (32) and discard seat.
- L. Remove filters (28 and 29) from ports of body (32) only if replacement is required (refer to Inspection/Check, step B).
- M. Remove identification plate (30) from body (32) by removing screws (31).

NOTE: Remove the identification plate from the body only if replacement is required.

3. Cleaning

WARNING: DO NOT ALLOW OIL, GREASE, FLAMMABLE SOLVENTS, OR OTHER COMBUSTIBLE MATERIALS TO COME IN CONTACT WITH PARTS THAT WILL BE EXPOSED TO PRESSURIZED OXYGEN. SUCH MATERIALS, AS WELL AS DUST, LINT, AND FINE METAL FILINGS ARE ALL POTENTIAL COMBUSTIBLES WHICH MIGHT, WHEN EXPOSED TO OXYGEN UNDER PRESSURE, IGNITE AND RESULT IN AN EXPLOSION.

- A. Using the material listed in Table I, perform the cleaning procedures outlined in the following paragraphs:

MATERIAL	DESCRIPTION	USE	REFER TO PARAGRAPH
Trichloroethylene (Stabilized)	MIL-T-27602	Method A Cleaning	4.B.(1)

**List of Cleaning Materials
Table I**

- B. Metal parts which have been contaminated can be cleaned by the following method using the material listed in Table I.

- (1) Method A. Use a vapor degreasing method with stabilized Trichloroethylene. Blow clean and dry with a stream of clean, dry, oil-free air.

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C. Non-metallic parts such as silicone and rubber components may be cleaned by using an ultrasonic detergent and water cleaning system. Rinse parts in clean water and dry thoroughly before reassembly.

4. Inspection/Check (See IPL figure 1)

- A. Visually inspect all parts for cracks, nicks, burrs or damaged threads which may cause regulator malfunction.
- B. Visually inspect filters (28 and 29) for contamination or corrosion.
- C. Visually inspect overall condition of parts for obvious damage.

5. Repair (See IPL figure 1)

- A. Repair of parts other than removing burrs or chasing threads is not recommended.
- B. Replace diaphragm (20), seal (22), packing (26) and seat (27) at overhaul.

6. Assembly (See IPL figure 1)

NOTE: Table II lists the consumable materials for assembly.

MATERIAL	DESCRIPTION	MANUFACTURER	REFER TO PARA.
Sealing Tape	Permacel Tape No. 412	V99742	6.A.
Leak Test Solution.	Leak-Tek Formula 16-OX (MIL-L-25567)	V03530	8.A.(1)(d) 8.A.(3)(c),(e),(j)
Oxygen	MIL-O-27210, Type I	V07098	8.
Oxygen Lubricant	Fluorolube Grade S-30	V91784	6.C.

* Refer to Illustrated Parts List, step A. (3) for Vendor's Code.

List of Consumable Material for Assembly
Table II

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NOTE: Prior to assembling a 800480 regulator, note the part number and determine the parts applicable to that assembly (refer to "EFFECT CODE" column of the Illustrated Parts List). Disregard any instructions that do not apply to the particular assembly being overhauled.

- A. Apply 1-1/2 wraps of sealing tape to all except the first male thread of pressure gage (6), plug (7), fittings (8, 10 and 11), nipple (9) and relief valve assembly (13). Wrap the tape in the opposite direction of the running threads. Trim off excess tape.
- B. Position inlet filter (29) and outlet filter (28) in their respective ports in body (32).
- C. Place packing (26) in groove of sleeve (25). Place seat (27) on end of sleeve (25). Apply a wipe coat of Fluorolube, Grade S-30 to packing (26).
- D. Thread sleeve (25) into body (32) and torque per Table III.
- E. Thread three setscrews (14) into the holes provided in body (32) until they are flush with inside of body (32). (Use one setscrew in each of three holes.)
- F. Assemble items 17 through 22 as follows:
 - (1) Place seal (22) in groove of piston assembly (21). Position the seal as illustrated in figure 3.
 - CAUTION:** USE EXTREME CARE WHEN PLACING SEAL (22. IPL FIGURE 1) ON PISTON ASSEMBLY (21) SO AS NOT TO MAR OR DAMAGE THE MINUTE SEALING RIDGES ON PERIPHERY OF SEAL (22).
 - (2) Position diaphragm (20) and retainer (19) and secure to piston assembly (21) with screw (18).
 - (3) Place the items assembled in step (2) above, in cap (17).

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- G. Thread jam nut (16) onto the regulator body (thread the jam nut all the way back on the regulator body).
- H. Place the regulator body, with sleeve (25) and seat (27) installed, onto arbor press assembly (2, figure 7). Spring loaded sleeve of arbor press will pass through the hole in seat (27, IPL figure 1) when flat of body (32) is positioned on flat of arbor press.
- I. Place washer (24) and spring (23) in body (32).
- J. Carefully position the items assembled in step E (items 17 through 22) in body (32).

CAUTION: EXERCISE CARE WHEN INSERTING TIP OF PISTON ASSEMBLY (21) INTO SLEEVE OF ARBOR PRESS TO PREVENT BENDING OF THE TIP.

- K. Place cap nut (15) on cap (17). Depress cap (17) with the arbor press until it bottoms. While holding in this position, thread cap nut (15) on body (32). Release the handle of the arbor press.
- L. Remove the partially assembled regulator from the arbor press. Tighten cap nut (15) using wrench (3, figure 7).
- M. Lock the cap nut in place by threading jam nut (16, IPL figure 1) against the cap nut.
- N. Place nut (12) on inlet fitting (11). Thread inlet fitting (11) into body (32) and torque per Table III.
- O. Thread inlet fitting (10) into body (32) and torque per Table III.
- P. Thread outlet fitting (8) or nipple (9) into body (32) and torque per Table III.
- Q. Thread pressure gage (6) or plug (7) into body (32) and torque per Table III.
- R. Test and adjust the regulator assembly in accordance with Testing.

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- S. Thread the remaining three setscrews (14, IPL figure 1) into body (32) (use one setscrew in each of three holes) until they bottom against setscrews (14) inserted in step E.
- T. Secure identification plate (30) to body (32) with screws (31).

7. Fits and Clearances

Table III presents the torque values necessary to assemble the units.

UNIT	TORQUE
Gage (6, IPL figure 1)	* 40-150 Inch Pounds
Plug (7)	* 40-150 Inch Pounds
Outlet Fitting (8)	* 60-250 Inch Pounds
Nipple (9)	* 60-250 Inch Pounds
Inlet Fittings (10 and 11)	* 60-250 Inch Pounds
Relief Valve Assembly (13)	* 60-250 Inch Pounds
Sleeve (25)	* 40-250 Inch Pounds

* Torque components to minimum values. If leakage occurs, retorque to a higher value but do not exceed the maximum. Vent pressures before retorquing.

Assembly Torque Values
Table III

8. Testing

WARNING: IN ALL PROCEDURES LISTED BELOW, OXYGEN IS SPECIFIED AS THE TEST GAS. WATER PUMPED NITROGEN OR OIL-FREE AIR MAY BE SUBSTITUTED, BUT RESULTS MUST BE CONVERTED PRIOR TO BEING COMPARED WITH THE RESULTS SPECIFIED FOR OXYGEN. DO NOT, UNDER ANY CIRCUMSTANCES, USE OIL PUMPED GAS AS THIS WILL CAUSE CONTAMINATION OF THE REGULATOR AND TEST EQUIPMENT. OIL, EVEN IN MINUTE QUANTITY, COMING IN CONTACT WITH OXYGEN MAY CAUSE AN EXPLOSION OR FIRE.

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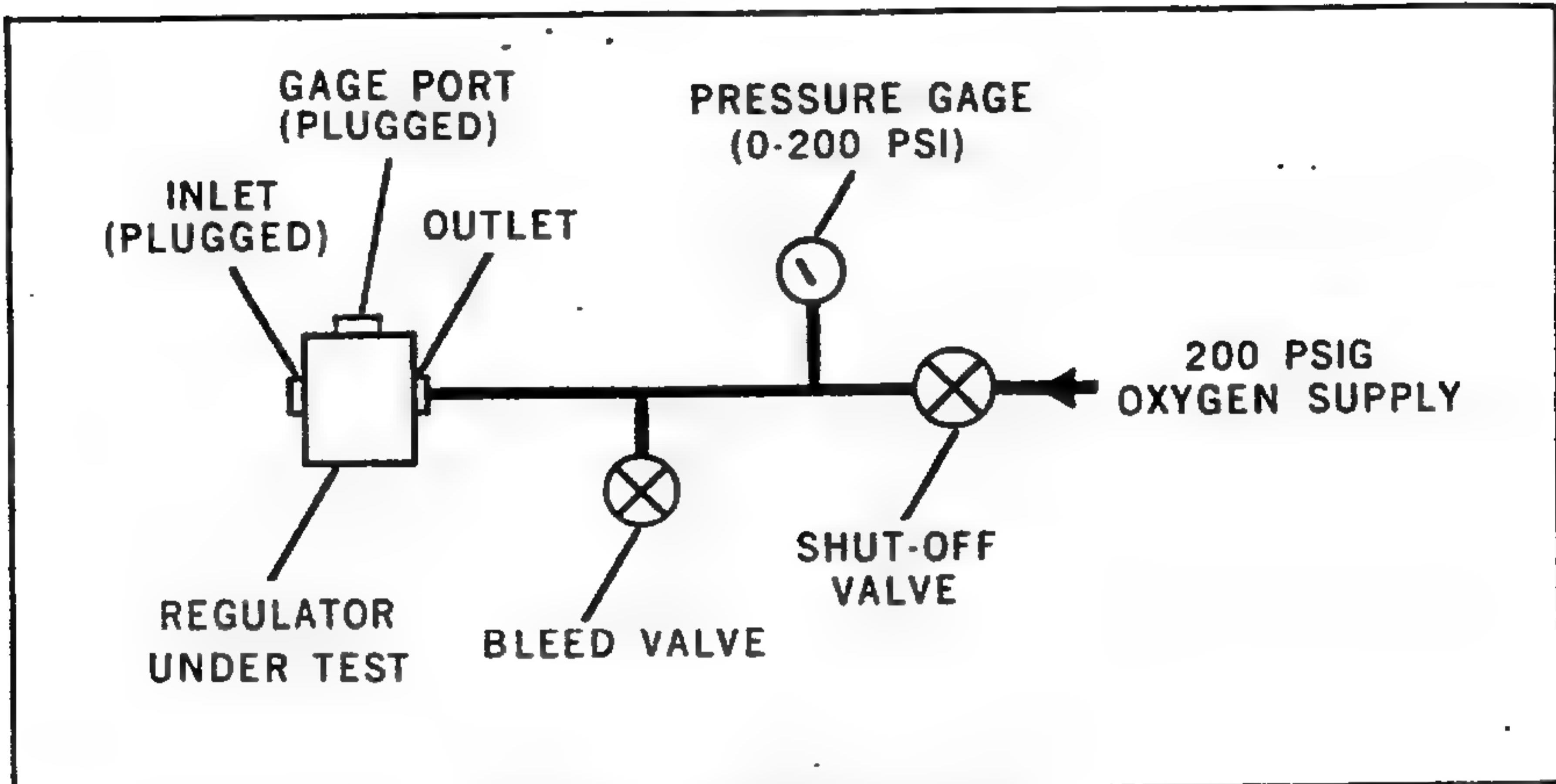
**800480 SERIES
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- (1) Connect relief valve (13, IPL figure 1) to a 200 psig regulated source with master gage.
- (2) Slowly apply pressure to the valve inlet. Relief valve shall relieve between 180 and 200 psig as indicated on the master gage.
- (3) After venting, decrease the outlet pressure until the relief valve reseats. The relief valve shall reseat above 165 psig as indicated on the master gage.
- (4) Remove pressure from the relief valve and remove the relief valve from the source.

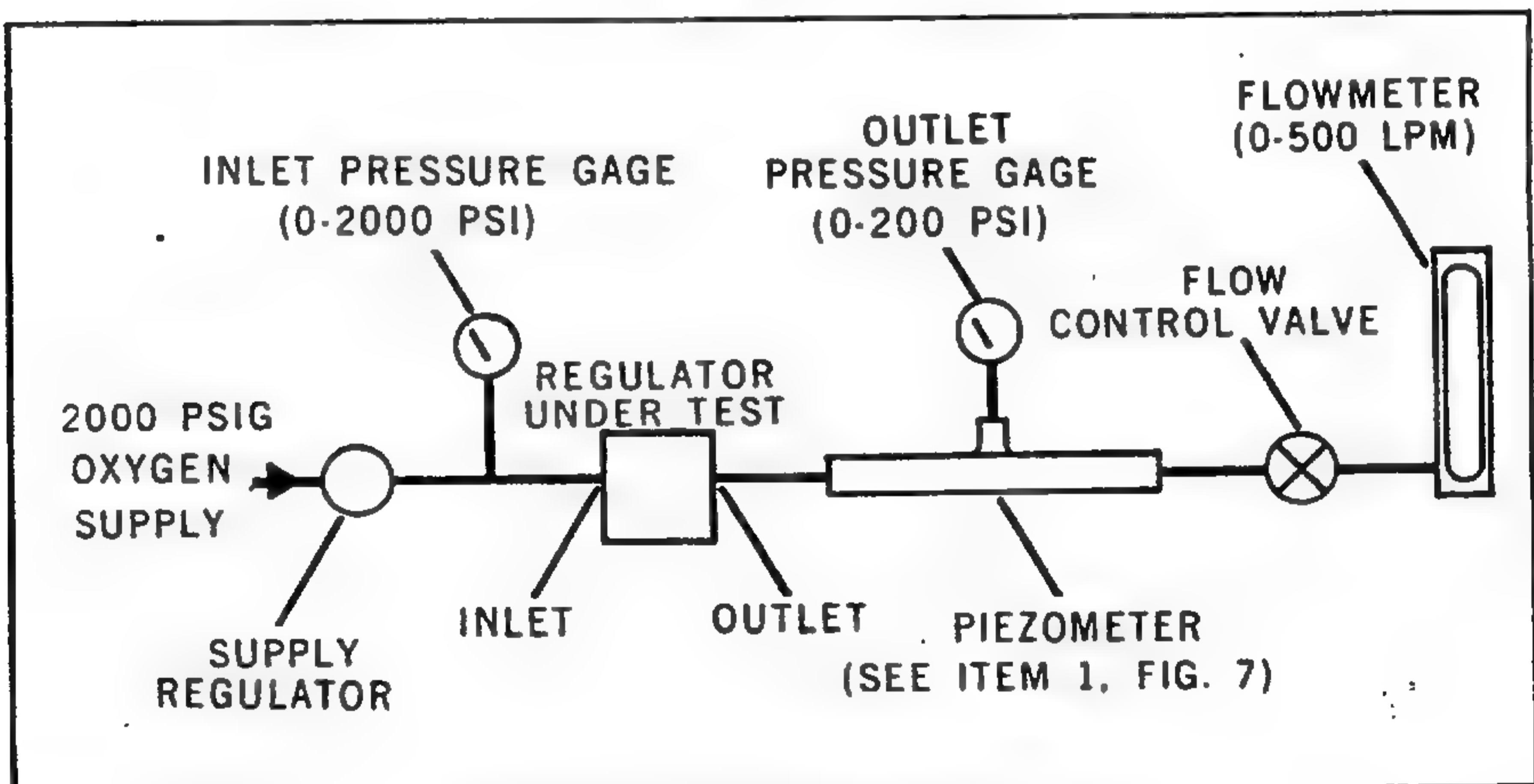
B. Cycling (See figure 4)

- (1) Plug the inlet and relief valve port of the regulator.
- (2) Slowly open the shut-off valve, applying 200 psig oxygen to the regulator outlet for 2 minutes.
- (3) Close the shut-off valve. Bleed the regulator by opening the bleed valve. Close the bleed valve after bleeding the regulator.
- (4) Repeat steps (2) and (3) three times.
- (5) Remove the regulator from the test setup and remove the inlet plug and relief valve port plug.
- (6) Thread relief valve (13. IPL figure 1) into body (32) and torque per Table III.
- (7) Place the regulator in a test setup as illustrated in figure 5.
- (8) Adjust the supply regulator for an indication of 100 psig on the inlet pressure gage.
- (9) Open and close (cycle) the flow control valve for 15 minutes (approximately 20 cycles per minute).

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Regulator Test Setup No. 1
Figure 4



Regulator Test Setup No. 2
Figure 5

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- (10) After cycling, shut-off the supply regulator and bleed the test setup:

C. Regulated Pressure and Flow Test

- (1) With the regulator in a test setup as illustrated in figure 5, perform the following procedure.
- (2) Close the flow control valve. Adjust the supply regulator for an indication of 1800 psig on the inlet pressure gage. Adjust three setscrews (14, IPL figure 1) equally (i.e. 1/2 turn, 1 turn) for an indication of 150 ± 10 psig on the outlet pressure gage.

NOTE: Count turns of adjusting screws. Do not turn in more than 1/4 inch which is equivalent to 8 turns. If more turns are required, use additional washers (24) which are the equivalent of two (2) turns thick.

- (3) Open and adjust the flow control valve for an indication of 65 lpm on the flowmeter. Outlet pressure gage shall indicate 150 ± 10 psig at 65 lpm.
- (4) Close the flow control valve. The outlet pressure gage shall indicate 150 ± 10 psig at 0 lpm.
- (5) Adjust the supply regulator for an indication of 1000 psig on the inlet pressure gage. Outlet pressure gage shall indicate 103 ± 10 psig at 65 lpm.
- (6) Close the flow control valve. The outlet pressure gage shall indicate 103 ± 10 psig at 0 lpm.
- (7) Adjust the supply regulator for an indication of 100 psig on the inlet pressure gage. Outlet pressure gage shall indicate 50 ± 10 psig at 0 lpm.
- (8) Open and adjust the flow control valve for an indication of 65 lpm on the flowmeter. Outlet pressure gage shall indicate 50 ± 10 psig at 65 lpm.

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NOTE: If setscrews (14, IPL figure 1) require adjustment after performing step (2), steps (2) through (7) must be repeated until all steps are successfully completed without further setscrew adjustment.

- (9) Fully open the flow control valve. A minimum of 200 lpm shall be indicated on the flowmeter with 100 psig inlet pressure.
- (10) Close the flow control valve, adjust the supply regulator for zero indication on the inlet pressure gage and remove the regulator from the test setup.

D. Leakage Test

- (1) Plug the regulator outlet.
- (2) Apply 1800 psig oxygen to the regulator inlet. Apply leak test solution to all external fittings and nuts (15 and 16, IPL figure 1). No leakage is allowed.
- (3) Repeat step (2) with an inlet pressure of 100 psig.
- (4) Adjust inlet pressure to 1800 psig. Check for internal leakage at the bleed hole in body (32, IPL figure 1). Leakage shall not exceed 10 cc per minute.
- (5) Repeat step (4) with an inlet pressure of 100 psig.
- (6) Remove the inlet pressure, remove the regulator outlet plug and dry the regulator thoroughly with low pressure oil-free air.

E. Pressure Gage Test

- (1) Apply pressures of 100, 500, 1000, 1500, and 1800 psig to the regulator inlet. At each of the above pressures, pressure gage (6, IPL figure 1) must agree with the inlet pressures within 50 psig.
- (2) After test, remove the inlet pressure from the regulator.
- (3) Complete assembly (refer to Assembly, step S).

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9. Trouble Shooting

A. See figure 6 for trouble shooting chart.

TROUBLE	PROBABLE CAUSE	REMEDY
Leakage at pressure gage (6, IPL figure 1)	Loose or defective pressure gage (6, IPL figure 1)	Retorque per Table III. Replace if required
Leakage at outlet fitting (8), inlet fitting (10 or 11) and/or relief valve assy. (13)	Loose or defective fittings (8,10 or 11) and/or relief valve assembly (13)	Retorque per Table III. Replace if required
Regulator fails to maintain the proper relationship between supply pressure and regulated pressure	Regulator out of adjustment	Adjust the regulator per Testing, Step C
	Defective seat (27)	Replace seat
	Defective seal (22)	Replace seal
	Defective diaphragm (20)	Replace diaphragm
	Defective packing (26)	Replace packing
Internal leakage exceeds 10 cc per minute	Defective seal (22)	Replace seal
	Defective packing (26)	Replace packing
Relief valve assy. (13) does not vent and/or reseat at proper pressure	Defective relief valve assembly (13)	Replace relief valve assembly

Trouble Shooting Chart (Sheet 1 of 2)
Figure 6

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9. Trouble Shooting (Continued)

TROUBLE	PROBABLE CAUSE	REMEDY
Pressure gage (6) not accurate within \pm 50 psig with inlet pressure	Defective pressure gage (6)	Replace pressure gage
Unable to flow 200 lpm with an inlet pressure of 100 psig	Clogged inlet filter (29)	Clean inlet filter or replace
	Port(s) of body (32) obstructed	Clean body per paragraph 4

Trouble Shooting Chart (Sheet 2 of 2)
Figure 610. Storage Instructions

- A. Seal all ports to prevent foreign matter from entering the regulator. Do not use preservative coatings of any kind.
- B. Place the regulator, with desiccant, in a plastic bag and seal the plastic bag.
- C. Store in a dry, cool area.

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11. Special Tools, Fixtures and Equipment

- A. The special tools, fixtures and equipment required to overhaul the regulator are listed in figure 7 and illustrated in figure 8.

FIGURE 8 ITEM NO.	PART NO.	PART NAME	APPLICATION
1	10260-T58-1	Piezometer	Used during the testing of the regulator
2	800480-T57-1	Arbor Press Assembly	Used during reassembly to align piston assembly (21, IPL figure 1) with seat (27)
3	800480-T91-1	Wrench	Used during disassembly/reassembly to remove/install nuts (15 and 16)

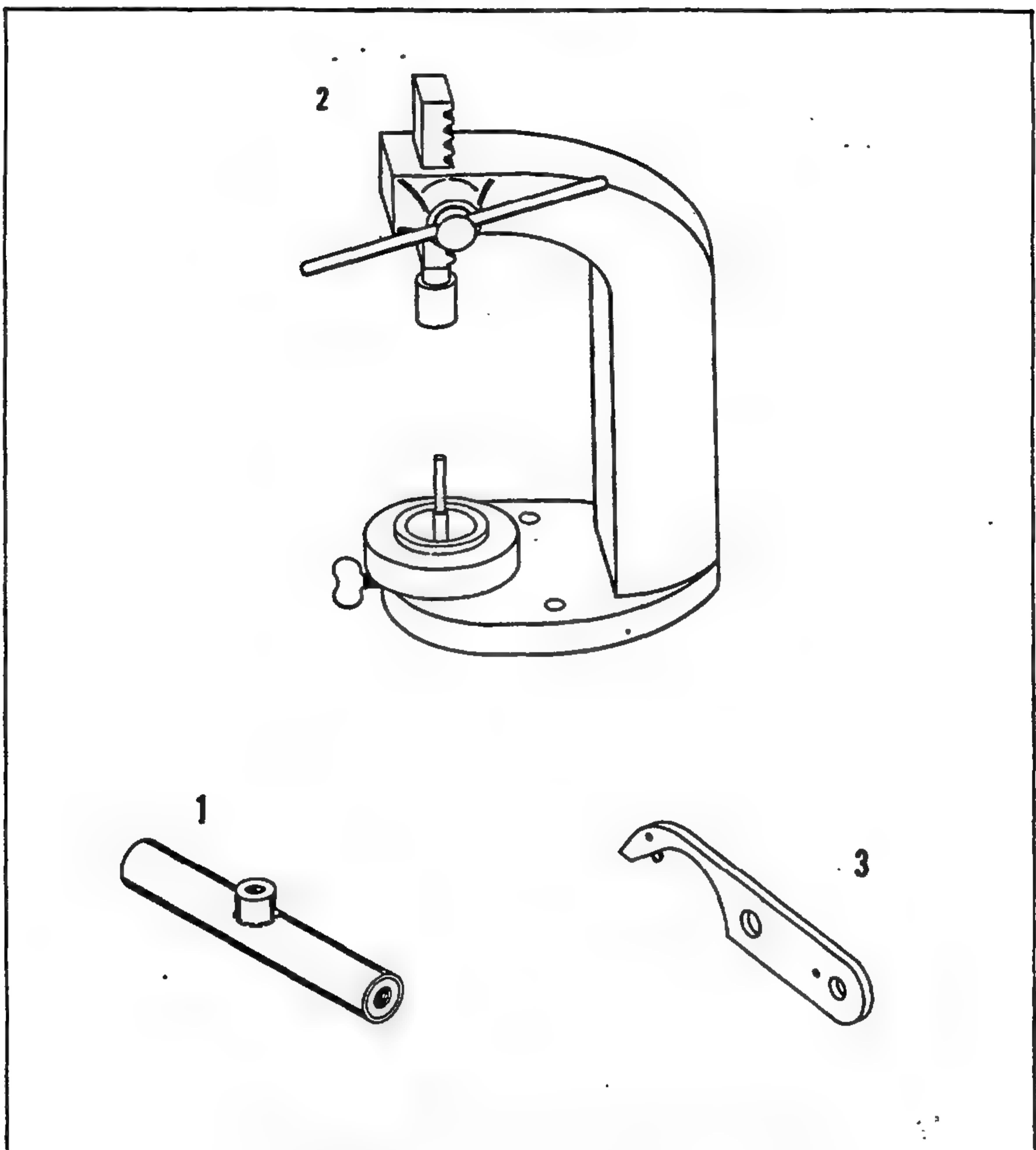
NOTE: All special tools, fixtures and equipment listed are manufactured by Scott Aviation, Lancaster, N.Y.

List of Special Tools, Fixtures and Equipment
Figure 7

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Special Tools, Fixtures and Equipment
Figure 8

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12. Illustrated Parts List

A. This Illustrated Parts List lists and describes the parts for the 800480 Series Variable Pressure Regulator Assembly.

- (1) The Illustrated Parts List consists of a parts listing and a completely indexed drawing. The regulator assemblies are followed immediately by their component parts, properly indented thereunder, to show their relationship to the assemblies.
- (2) The part numbers listed in the "PART NUMBER" column are Scott Aviation part numbers except standard parts, which are listed by "MS" and "AN" part numbers, and vendor items, which are listed by vendor part numbers. Commercial hardware available at commercial sources is identified by the abbreviation "COML" in the "PART NUMBER" column.
- (3) A six place code, following the description of a part indicates the manufacturer of that part. Standard parts and parts carried under Scott part numbers have no vendor's code. The following list contains the codes, and names and addresses of manufacturers supplying components or materials for the regulator assembly.

VENDOR'S CODE

CODE	NAME AND ADDRESS
V03530	American Gas and Chemicals, Inc. New York, New York
V07098	Union Carbide Corporation Linde Division Tonawanda, New York
V09055	Bal-Seal Engineering Company La Habra, California

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**800480 SERIES
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CODE	NAME AND ADDRESS
v45722	Parker Kalon Corporation Clifton, New Jersey
v91784	Hooker Chemical Corporation Niagara Falls, New York
v99742	Johnson and Johnson, Inc. Permacel Division New Brunswick, New Jersey

- (4) Parts used on only one part number regulator are indicated by a letter symbol immediately following the description of a part in the "EFFECT CODE" column. An explanation of the letter symbols used is outlined below. In cases where the "EFFECT CODE" column has been left blank, parts listed are common to all regulator assemblies.

PART NO.	EFFECT CODE
800480-00	A
800480-01	B
800480-02	C
800480-03	D
800480-04	E

B. How to Use This Illustrated Parts List

- (1) If neither the part number nor the nomenclature is known, the part can be found by comparison with the exploded view illustration. When located on the illustration, the item number will refer to the line in the Illustrated Parts List with the part number and the nomenclature.

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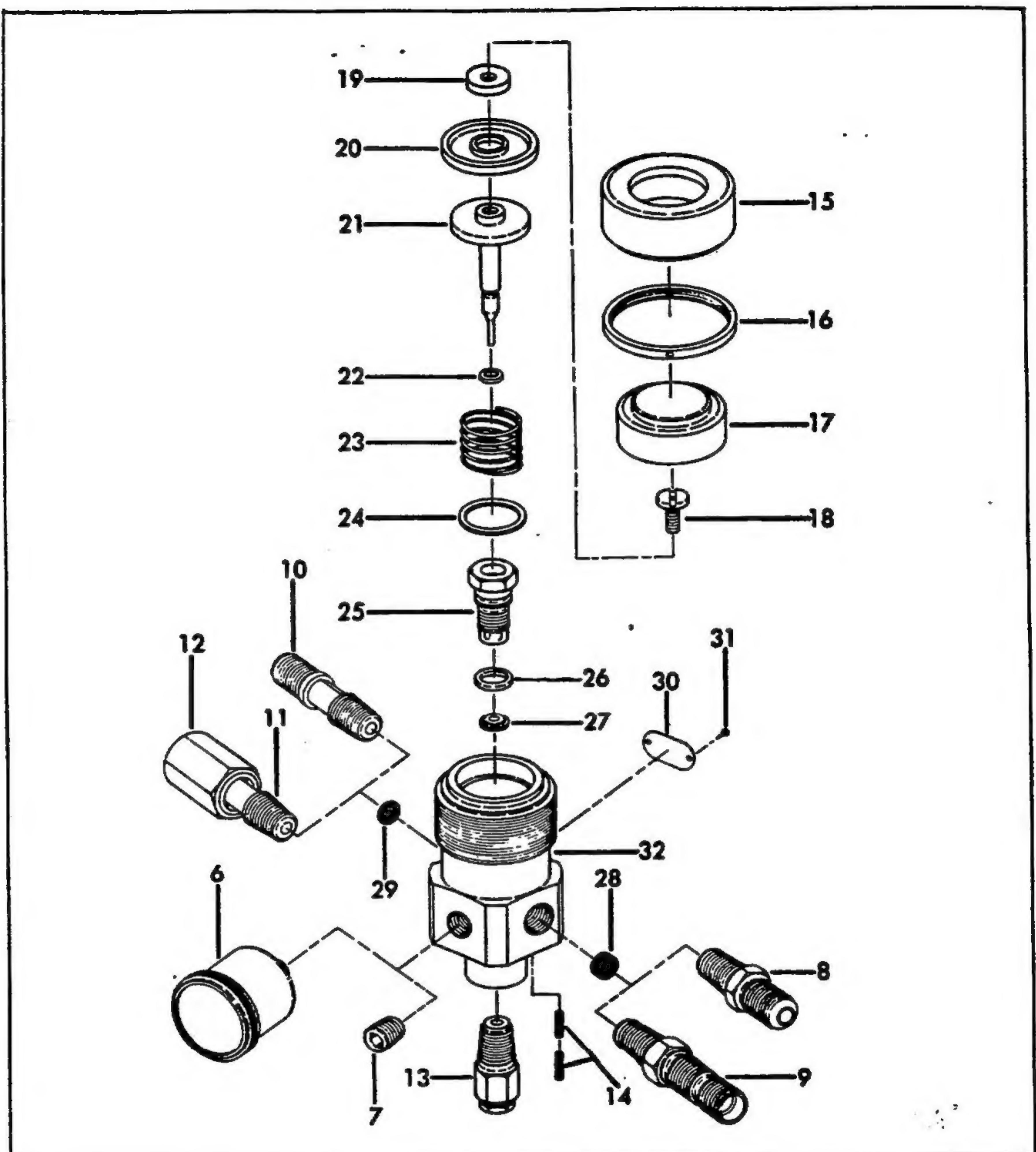
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- (2) If the part number is known and it is desired to find the nomenclature or illustration, locate the part number in the "PART NUMBER" column of the Illustrated Parts List. The next column gives the nomenclature and the item number refers to the part number in the exploded view.

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Variable Pressure Regulator Assembly
Figure 1

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FIG. ITEM	PART NUMBER	NOMENCLATURE	EFFECT	UNITS
			CODE	PER ASSY
1 - 1	800480-00	REGULATOR ASSEMBLY - VARIABLE PRESSURE	A	1
- 2	800480-01	REGULATOR ASSEMBLY - VARIABLE PRESSURE	B	1
- 3	800480-02	REGULATOR ASSEMBLY - VARIABLE PRESSURE	C	1
- 4	800480-03	REGULATOR ASSEMBLY - VARIABLE PRESSURE	D	1
- 5	800480-04	REGULATOR ASSEMBLY - VARIABLE PRESSURE	E	1
6	2661-4	. GAGE-PRESSURE	ACD	1
7	6818-1	. PLUG	BE	1
8	24756	. FITTING-OUTLET	ABDE	1
9	AN816-5-4C	. NIPPLE	C	1
10	24757	. FITTING-INLET	DE	1
11	5447	. FITTING-INLET	C	1
12	6121-P	. NUT-INLET FITTING	C	1
13	5081-3	. VALVE ASSEMBLY-RELIEF		1
14	COML	. SETSCREW-SPLINE SOCKET, STAINLESS STEEL, CUP POINT, 6-32 BY 3/8 IN.LG		6
15	10000590	. NUT-CAP		1
16	10000937	. NUT-JAM		1
17	10000592	. CAP		1
18	10000805	. SCREW-ORIFICE		1
19	10000587	. RETAINER		1
20	10001015	. DIAPHRAGM		1
21	800518-00	. PISTON ASSEMBLY		1
22	200-08	. SEAL (V09055)		1
23	10003427	. SPRING-HELICAL, COMPRESSION (SUPERSEDES 10000982)		1
24	10001006	. WASHER		1
25	10000938	. SLEEVE		1
26	MS28775-13	. PACKING-PREFORMED		1
27	10002576	. SEAT (SUPERSEDES 10000588)		1
28	5449	. FILTER-OUTLET		1
29	10398-1	. FILTER-INLET		1
30	10000934	. PLATE-IDENTIFICATION ATTACHING PARTS		1
31	UQx1/8	. SCREW-DRIVE (V45722) -----		2
32	10000593	. BODY-REGULATOR		1

- ITEM NOT ILLUSTRATED

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